

Machine Learning with Python

About This Course

This Machine Learning with Python course dives into the basics of machine learning using an approachable, and well-known, programming language. You'll learn about Supervised vs Unsupervised Learning, look into how Statistical Modeling relates to Machine Learning, and do a comparison of each.

Look at real-life examples of Machine learning and how it affects society in ways you may not have guessed!

Explore many algorithms and models:

- Popular algorithms: Classification, Regression, Clustering, and Dimensional Reduction.
- Popular models: Train/Test Split, Root Mean Squared Error, and Random Forests.

Get ready to do more learning than your machine!

Course Syllabus

Module 1 - Supervised vs Unsupervised Learning

- Machine Learning vs Statistical Modelling
- Supervised vs Unsupervised Learning
- Supervised Learning Classification
- Unsupervised Learning

Module 2 - Supervised Learning I

- K-Nearest Neighbors
- Decision Trees
- Random Forests
- Reliability of Random Forests
- Advantages & Disadvantages of Decision Trees

Module 3 - Supervised Learning II

- Regression Algorithms
- Model Evaluation
- Model Evaluation: Overfitting & Underfitting
- Understanding Different Evaluation Models

Module 4 - Unsupervised Learning

- K-Means Clustering plus Advantages & Disadvantages
- Hierarchical Clustering plus Advantages & Disadvantages
- Measuring the Distances Between Clusters - Single Linkage Clustering
- Measuring the Distances Between Clusters - Algorithms for Hierarchy Clustering
- Density-Based Clustering

Module 5 - Dimensionality Reduction & Collaborative Filtering

- Dimensionality Reduction: Feature Extraction & Selection
- Collaborative Filtering & Its Challenges

Prerequisites

- Python for data science